

# SCIENTIFIC ADVANCEMENTS IN INVESTIGATION OF SEXUAL OFFENCES

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## **I.ABSTRACT**

This paper seeks to trace the developments in forensic science in investigating sexual offences. The paper first starts with an introduction to the latest statistics pertaining to rape in India and highlights the problem of pendency of cases. The author then moves on to the guidelines in place for examining a rape victim and gives the disadvantages of the common two-finger test and reasons for abolishing of the same. The author then moves on to the advantages and disadvantages of the use of SAFE kits and then moves on to the benefits and hazards of DNA profiling how this method has been implemented in other countries. The paper ends with some suggestions and concludes with pushing forward the idea of DNA profiling.

## **II. HYPOTHESIS**

The author hypothesizes that if DNA profiling is introduced in India under a proper legislation, then it would significantly reduce the burden of proof on the victim. Since it is a very scientific method and more accurate, it could reduce the burden on the judiciary and also increase the conviction rates in sexual crimes.

## **III. RESEARCH METHODOLOGY**

The author has employed a mixed-methods research approach in the paper, i.e. components of both qualitative and quantitative research have been integrated. A detailed examination and analysis of the data of National Crime Record Bureau was carried out to understand the conviction rates of accused in crimes against women and the pendency rates in such cases. This analysis was further supplemented by research from secondary sources such as newspapers, court judgments, government schemes and guidelines and other research papers to discuss the merits and demerits of various testing procedures to be followed while investigating a sexual crime.

## **IV.INTRODUCTION**

Sexual assault is an act which is known as an offence in all countries worldwide even if the quantum of punishment differs from country to country. Along with punishment, the kinds of evidence permissible in court and testimonials also differ in every country. As far as India is concerned, the total conviction rate of crimes against women stood at 23.5% while the pendency rate for the same was 93.1%, if the latest statistics are to be believed.<sup>1</sup> Before determining whether the offence has been committed or not, whether the accused is guilty or not, it is necessary to examine the

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<sup>1</sup> National Crimes Record Bureau (Ministry of Home Affairs, Government of India), Court Disposal of Crime against Women in Metropolitan Cities – 2018 (Concluded), Crime in India- 2018 Statistics, (December 26, 2019), <http://ncrb.gov.in/sites/default/files/Crime%20in%20India%202018%20-%20Volume%201.pdf>

crime scene or in this case, the victims of the sexual assault. Forensic science or medical jurisprudence plays a very important role in determining the kind of assault or abuse carried out and the extent of brutality of the same. The methodology in India has evolved from using the two-finger test to the use of rape kits. A rather narrow definition of rape has been given in the Indian Penal Code (IPC), which does not include transgender people or men as victims.<sup>2</sup> These cases have been included in section 377 of the IPC or unnatural offences. The Supreme Court has laid down that rape can be considered a crime against humanity and violates the victim's right to life which is provided under Article 21.<sup>3</sup> The act of rape violates not only the physical being of the victim, but also their bodily autonomy and sense of dignity. This is why it is important to treat the victim with sensitivity even while completing formalities and guidelines for the same should be implemented strictly.

## **V. MEDICAL EXAMINATION OF THE VICTIM**

### **1. General Guidelines**

Before 2000, there was no system in place for the examination of rape victims. The doctors were not mandated to conduct the examination until the police gave directions. The medical officers would often be insensitive towards the victim, who would not be allowed to go for the examination until the FIR was filed. It was in the year 2000 that the Supreme Court held that the hospital is under a duty to check the victim even if they come of their own accord, without forwarding by the police and before filing a complaint. The victim has the right to be medically examined and no hospital can refuse. The court stated that this procedure is a medico-legal emergency and from here the hospital can file a complaint on behalf of the victim.<sup>4</sup>

However, there was still an absence of guidelines regarding the timeline of events after reporting of the incident and the way in which the test is to be carried out. Keeping this in mind, an amendment was made in the Code of Criminal Procedure (CrPC) by insertion of section 164A which specified that the victim of rape is to be taken for medical examination within 24 hours of receiving the complaint and the medical examination shall be conducted with the consent of the victim or the consent of anybody qualified on her behalf.<sup>5</sup>

After the Nirbhaya case, the Ministry of Health and Family Welfare formulated certain guidelines in order to supplement section 164A-

- The medical officer is supposed to record the basic details of the person who has brought the victim to the hospital, relationship between the person and the victim and the consent of the victim.
- While obtaining the consent of the victim, the examining officer is supposed to explain the details and the procedure of the medical examination. The Supreme Court has also stressed on the importance of informed consent, i.e. consent obtained after knowing the entire procedure and the risks involved and such consent has

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<sup>2</sup> § 375, The Indian Penal Code, Act No. 45, Acts of Parliament, 1860, (India)

<sup>3</sup> *Bodhisattva Gautam v. Subhra Chakraborty*, 1996 AIR 922 (India)

<sup>4</sup> *State of Karnataka v. Manjanna*, 2000 (6) SCC 188 (India)

<sup>5</sup> § 164A, The Code of Criminal Procedure (Amendment) Act, Act No.25, Acts of Parliament, 2005 (India)

to be voluntary.<sup>6</sup> The doctor can only proceed without consent in life-threatening cases, as given under section 92 of the IPC.

- At least two marks of identification like moles or scars are to be recorded.
- Details pertaining to menstruation and vaccinations are to be recorded and if the victim is menstruating, a second examination is to be conducted at a later date to record the injuries with more clarity.
- The medical examiner has to record the incident in the victim's words and if somebody else is doing so on her behalf, their name is to be noted. This statement shall be permitted in court as evidence.
- A general physical examination is also supposed to be conducted like searching for any blood or semen stains on the clothes, response to questions, pulse rate, blood pressure and temperature.
- The body is supposed to be examined for injuries, bite marks, boils, fractures, scratches or any discharge and these observations are supposed to be recorded.
- The genital areas and orifices are to be examined for any stray pubic hair, injury, semen traces and foreign materials. The sample of pubic hair is to be taken.
- The vagina is to be examined with a sterile speculum wetted with warm saline/ sterile water to check for any internal bleeding, bruises or injuries. If the victim is a minor and there are no signs of injuries or penetration, such an examination is not required. The examination is to be conducted under the effect of anesthesia.
- If the police has asked for any dental examination to determine the age of the victim, that is to be conducted.
- Urine and blood sample is to be taken to determine the chances of pregnancy and sexually-transmitted diseases.
- After completion of the examination, the medical officer is supposed to document all this information, formulate an opinion and sign the report. A copy of the same is to be handed over to the victim as it is her right to information.
- All evidence collected during the examination like clothes, foreign objects inserted in the vagina, pubic hair etc. is to be placed in an envelope, sealed carefully and handed over to a police officer or judicial magistrate.<sup>7</sup>

## 2. **Two-Finger Test**

These guidelines also strictly prohibited the use of the two-finger test. This was a test which was earlier commonly used by doctors to determine whether penetration had taken place or not. It is also called *vaginum per examination*. On examining the fingers, if they entered the vagina with some strain then the victim was deemed a virgin and if there was easy movement, the girl was assumed to have been sexually active. These observations would then be submitted to both the advocates and the advocate for the accused would use this to defend their client. This test is based on the assumption that the hymen is ruptured on the first instance of

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<sup>6</sup> Samira Kohli v. Dr. Prabha Manchanda, AIR 2008 SC 1385

<sup>7</sup> Ministry of Health and Family Welfare, Government of India, New Guidelines for Treatment of Sexual Assault Cases in Hospitals, Press Information Bureau, (March 12, 2013, 1:25 PM), <https://pib.gov.in/newsite/PrintRelease.aspx?relid=93470>

sexual intercourse and was deemed to be violative of a woman's right to privacy. The World Health Organization has also criticized the test and called it a social and cultural problem.<sup>8</sup> The assumption of a virgin having a tight hymen is also faulty since the hymen can tear due to physical activities like swimming and cycling and there are some women who are born without a hymen. There are also women who have their hymen intact inspite of multitude of sexual activities. The Supreme Court has held that this particular test violates the woman's right to privacy and violates her physical and mental space. The victim who has suffered from a traumatic incident must be protected and treated with care and understanding, instead of subjecting her to further trauma and torture.<sup>9</sup> Even after this ban on the virginity test, there are unfortunately practitioners who have still been relying on this test. Just after this ban, the Rajasthan High Court had held in a case that the fact that the victim was unmarried and habituated to sexual intercourse showed that she was a consenting party.<sup>10</sup>

### **3. Character Evidence**

Earlier, Section 155 of The Indian Evidence Act which talks about using character or previous conduct of a person as evidence, used to allow the defense lawyer of the accused to use the defense that the victim had an immoral character and was of easy virtue. This would allow the lawyer to ask the victim questions pertaining to her past relationships and sexual conduct. In the year 2002, an amendment was brought in which added a proviso to section 146, barring questions related to the moral character of the victim.<sup>11</sup> However, the medical officer is still allowed to ask the victim questions pertaining to her sexual history since it may have a bearing on the examination findings. It is mandatory to explain this amendment to the victim since she might be hesitant to reveal any vital information because of the fear that it might be used against her.<sup>12</sup>

### **4. Safety Concerns and Introduction of SAFE Kit**

A reading of Section 53 of the CrPC makes it clear that a victim should be examined by a female doctor only. This was to ensure the safety and comfort of the victim. However, there was a realization that there was a shortage of female doctors in hospitals (especially in rural areas) and their heavy workload would result in them examining the victim in a rush, defeating the whole purpose. Section 53A states that the examination is to be carried out by an allopathic doctor who is registered under the Medical Council of India, in a hospital managed by the government or any local authority. If there is no such practitioner within a 16km radius of

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<sup>8</sup> World Health Organization, Eliminating Virginity Testing, Sexual and Reproductive Health, <https://www.who.int/reproductivehealth/publications/eliminating-virginity-testing-interagency-statement/en/>

<sup>9</sup> Lillu @ Rajesh & Anr. v. State of Haryana, (2013) 14 SCC 643 (India)

<sup>10</sup> Vinay Krishna Ghatak v. State of Rajasthan, 2003 SCC OnLine Raj 946, (India)

<sup>11</sup> § 146(3), The Indian Evidence (Amendment) Act, Act No. 4, Acts of Parliament, 2003 (India)

<sup>12</sup> Ayush Verma, Why was the Two-Finger Test Banned? I Pleaders, (March 1, 2020), <https://blog.iPLEaders.in/why-was-the-two-finger-test-banned/>

the occurrence of the incident, a police officer, not below the rank of sub-inspector can direct the examination to be conducted by any registered practitioner.<sup>13</sup>

Looking at the sorry state of affairs in the police and health services pertaining to delivering justice to rape victims, the Delhi High Court mandated the use of a Sexual Assault Forensic Evidence (SAFE) Kit to examine rape victims. This kit contains detailed instructions to conduct the examination, a tube each for the blood and urine samples, cotton swabs to collect biological evidence, blanket and pillow, gown for the patient, camera, batteries, microscope and a hygiene tools besides many other things. Every hospital is supposed to keep separate rooms to conduct these examinations. They are also mandated to preserve samples in refrigerators or cool places till they are handed over to the police in order to prevent destruction of evidence.<sup>14</sup> However, this judgment is applicable only in Delhi and there needs to be a uniform set of guidelines to bind hospitals all over the nation. The Bombay High Court gave directions in the year 2010 for the central and state governments to form committee for the formulation of uniform guidelines governing examination of rape victims at hospitals.<sup>15</sup> As of now, we have the guidelines issued by the Ministry as discussed above.

## **5. Potential of DNA Profiling**

DNA profiling and finger-printing first came into use in the 1980s in the United Kingdom where it helped to nab a man guilty for the rape of two minors. From then, this technique has helped in catching many criminals and is known as a very accurate method. This method has dual benefits- it helps in pointing out both the innocence of those who are blameless and it provides specific evidence towards the guilt of the accused. With inputs of from Department of Biotechnology and Law Commission, the Parliament forwarded the DNA technology (Use and Regulation) Bill in the year 2016. This Bill has been passed by the Lok Sabha and is awaiting confirmation from the Rajya Sabha. Some features of the Bill are –

- The Bill seeks to regulate the use of DNA technology to establish the identity of a person and the set up of DNA laboratories in the country.
- This technology can be used to examine all offences listed under the IPC, Motor Vehicles Act, 1988 and various other statutes along with issues of parentage and transplant of human organs.
- A DNA Profiling Board, having 12 members is to be formed which shall be responsible for regulating and accrediting laboratories and making recommendations for furthering of this technology.
- This Bill provides for the establishment of a National DNA Data Bank along with Regional DNA Data Banks which shall be used to maintain important information to locate missing people and suspects.

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<sup>13</sup> § 53A, The Code of Criminal Procedure, Act No. 2, Acts of Parliament, 1974 (India)

<sup>14</sup> Delhi Commission for Women v. Delhi Police, 2009 SCC OnLine Del 1057, (India)

<sup>15</sup> Dr. Ranjana Pardi v. Union of India, WPST/46/2010, (India)

- Written consent of the individual is required in order to collect a DNA sample except for offences punishable with more than seven years of imprisonment and death. The Magistrate may order for collection of this sample if he feels it is required.
- The Bill also mandates these Banks to keep the information safe and secure and provides punishment to those who seek to steal the data.<sup>16</sup>

However, this technique is not free from controversies and faces a lot of obstacles. The debate about self-incrimination, which is every person is protected against as per the Constitution of India, comes in. An eleven judge bench of the Supreme Court has held that when an accused is called upon to give any handwriting specimen or finger impression, it is not a personal testimony. If the accused is called upon to give a statement, he can agree to do so or deny. But if he gives any evidence which is of a scientific nature, he may try to conceal information but cannot change the outcome because of the intrinsic nature of this evidence. Hence, the maxim of ‘being a witness against one’s own cause’ does not come into the picture.<sup>17</sup> Whenever there is a conflict between the right to privacy and the court’s duty to find out the truth, the court must consider the interests of both the parties and exercise its discretion.<sup>18</sup> The Supreme Court has also denied the presence of the right of privacy during the process of search and seizure, to ensure the greater protection of society.<sup>19</sup>

On the other hand, the Supreme Court has taken quite a contrasting position in a case where it has held that right to privacy is an integral part of the right to life and every individual should be allowed some amount of freedom, without public scrutiny.<sup>20</sup> The Supreme Court, in the landmark ‘Aadhaar judgment’ had held that the right to privacy is the most cherished constitutional right and without it, Article 21 would be deprived of its strength.<sup>21</sup> The Supreme Court also introduced the concept of ‘narrow tailoring’ which means that even if there is a greater interest, it should be served in such a way so as to ensure the narrowest possible infringement on the individual’s rights and also look out for the interest of society.<sup>22</sup>

Another aspect is that DNA is one of the most private elements of any human being and it stands at a very high risk of being misused. Also, DNA profiling is not 100% foolproof since there are chances of an error or mix-up which could result in a person losing his statutory rights and liberties. Also, the proposed legislation does not lay down the duration for which the DNA Bank will store the data nor does it provide any framework of deletion or disposal of such data.

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<sup>16</sup> Shubham Borkar & Asish Mishra, DNA Profiling in India, MONDAQ, (February 18, 2019), <https://www.mondaq.com/india/Technology/782032/DNA-Profiling-in-India-Towards-the-New-Age-DNA-Technology-Use-and-Application-Bill-2018>

<sup>17</sup> State of Bombay v. Kathi Kalu Oghad, AIR 1961 SC 1808 (India)

<sup>18</sup> Bhabani Prasad Jena v. Convenor Secretary, Orissa State Commission for Women, AIR 2010 SC 2851, (India)

<sup>19</sup> M P Sharma v. Satish Chandra, AIR 1954 SC 300, (India)

<sup>20</sup> Ram Jethmalani v. Union of India, (2011) 8 SCC 1, (India)

<sup>21</sup> Justice K S Puttaswamy (Retd.) v. Union of India, (2015) 8 SCC 735, (India)

<sup>22</sup> Anuj Garg v. Hotel Association of India, AIR 2008 SC 663, (India)

In the United States, the Federal Bureau of Investigation has developed a Combined DNA Index System and the Supreme Court here has held that in serious offences, the officers are authorized to obtain DNA sample in the form of cheek swabs which can be used as evidence in courts and this can be allowed as an intrusion on the individual's right to privacy.<sup>23</sup> On the other hand, in the United Kingdom, the Criminal Justice and Public Order Act provides for the setup of the National DNA Database and classifies offences as 'recordable' and individuals charged under these offences can be compelled to give DNA samples to the police. The police is permitted to take such data before the commencement of the investigation to speed up the entire process. In China, the DNA Banks have been established by the Ministry of Justice. For sexual offences, the accused has to voluntarily surrender this data and in case he refuses, the prosecutor can compel him to do otherwise. Photographic and written records of the samples can be retained for up to 10 years. Internationally also the human rights angle is invoked since the Universal Declaration of Human Rights, 1948 calls privacy an essential right and states that no man shall face any arbitrary attack over his honour or privacy and the International Covenant on Civil and Political Rights also gives protection against self-incrimination.<sup>24</sup>

## **VI.SUGGESTIONS**

- Doctors need to be trained to be sensitive towards the victim and not resort to moral-shaming or regressive testing techniques.
- While the Supreme Court has been very proactive in stepping in and issuing directions, it needs to ensure implementation of the same, both by doctors and the lower courts.
- The problem with the usage of SAFE kits is that the cost of procuring one is very high and there is a shortage of them to provide for each victim. There will also be an increased cost of training practitioners for the same. A budgetary allocation must be made for the same or the Nirbhaya funds could be put to use here.
- Keeping in mind the comfort of the rape victim, the examination should be carried out by a female doctor only or by a male doctor in the presence of at least one nurse.
- While the privacy concern for DNA profiling is valid, it could be reduced by providing a time period for which the data bank will keep such samples and it should specified more that in which cases DNA data will be collected from whom.

## **VII.CONCLUSION**

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<sup>23</sup> *Maryland v. King*, 133 S. Ct. 1958 (2013), (U.S.A)

<sup>24</sup> Shubham Borkar & Asish Mishra, DNA Profiling in India, MONDAQ, (February 18, 2019), <https://www.mondaq.com/india/Technology/782032/DNA-Profiling-in-India-Towards-the-New-Age-DNA-Technology-Use-and-Application-Bill-2018>

In crimes of a sexual nature, it is essential that information collected is such that it points in a definite direction, i.e. towards the innocence or the guilt of the accused. Also, by taking DNA sample, it will place further burden on the accused to prove that he didn't commit the act instead of subjecting the victim to tortuous tests and since the evidence will be of a scientific nature, there are less chances of manipulation. Society is very dynamic in nature and it keeps moving with development in technology. Hence, there is no reason why law shouldn't incorporate such changes and reduce the pendency of trials, thereby reducing the burden on the judiciary.